

**Missouri Department of Elementary and Secondary Education
Division of Special Education**

**COMPARISON OF
GRADUATION AND DROPOUT RATE CALCULATIONS**

Purpose: To explain the difference in calculation methods of graduation rates and dropout rates utilized by the United States Office of Special Education Program (OSEP), the Missouri Division of Special Education (DSE) and the Missouri Department of Elementary and Secondary Education (DESE) for comparative analysis and interpretation

Graduation Rates:

Graduation rates are expressed as percentages. As with any numerical or statistical representation, caution should be exercised with regard to interpretation. As such, for purposes of interpreting and for comparing OSEP's rates with Missouri's, an understanding of how each is calculated is integral for understanding what each rate represents.

The calculation methods are as follows:

- **United States Office of Special Education Programs (OSEP):**

Graduation Rate of Students with Disabilities =

$$\frac{[\text{Number of Graduates Receiving A Regular High School Diploma (02)}^1 \div (\text{Number Graduates (02)} + \text{Number Received Certificate (03)} + \text{Number Reached Maximum Age (04)} + \text{Number Died (05)} + \text{Number Dropouts (08)})]}{\times 100}$$

This calculation represents the number of graduates as a percent of the number of exiters ages 14-22.

- **Missouri Division of Special Education (DSE):**

Graduation Rate of Students with Disabilities =

$$[\text{Number of Graduates Receiving A Regular High School Diploma (02)} \div (\text{Number Graduates (02)} + \text{Number Received Certificate (03)} + \text{Number Reached Maximum Age (04)} + \text{Number Moved, Not Known To Be Continuing (07)} + \text{Number Dropouts (08)})] \times 100$$

This calculation represents the number of graduates as a percent of the number of exiters ages 14-22.

- **Missouri Department of Elementary and Secondary Education (DESE):**

Graduation Rate of All Students =

$$[\text{Number of Graduates} \div (\text{9-12 Cohort}^2 \text{ Dropouts} + \text{Graduates})] \times 100$$

This represents the number of graduates as a percent of the sum of graduates and dropouts in grades 9 – 12.

Comments: All three of these graduation rate calculations compare the number of graduates to the number of students leaving school (the sum of graduates and dropouts). The key difference between the calculations is the definition of a “dropout.” Missouri’s special education calculation method yields a lower rate as compared to OSEP’s as the denominator represents a larger value due to the inclusion of Moved, Not Known to Be Continuing. The number of students counted as Moved, Not Known to Be Continuing is significant enough to reduce Missouri’s calculated rate by 5%. The addition of the number of students that died in OSEP’s calculation is insignificant in altering the graduation rate as it is (thankfully) a relatively small value. Both OSEP’s and DSE’s dropout numbers represent the number of students who dropped out in that year, while DESE’s dropout number represents the number of cohort dropouts over a four year time period.

¹ The numbers in parentheses represent exit codes (02, 03, 04, 05, 07 and 08). Descriptive information concerning these codes can be found in the *Missouri Core Data Collection System Manual*, page 211.

² 9-12 Cohort=A cohort of students that starting ninth grade together.

Dropout Rates:

Dropout rates are expressed as percentages. As with any numerical or statistical representation, caution should be exercised with regard to interpretation. As such, for purposes of interpreting and for comparing OSEP's rates with Missouri's, an understanding of how each is calculated is integral for understanding what each rate represents.

The calculation methods are as follows:

- **United States Office of Special Education Programs (OSEP):**

Dropout Rate of Students with Disabilities =

$$[\text{Number of Dropouts (08)} \div (\text{Number Graduates (02)} + \text{Number Received Certificate (03)} + \text{Number Reached Maximum Age (04)} + \text{Number Died (05)} + \text{Number Dropouts (08)})] \times 100$$

This represents the number of dropouts as a percent of the number of exiters ages 14-22.

- **Missouri Division of Special Education (DSE):**

Dropout Rate of Students with Disabilities =

$$[(\text{Number Received Certificate (03)} + \text{Number Reached Maximum Age (04)} + \text{Number Moved, Not Known To Be Continuing (07)} + \text{Number Dropouts (08)}) \div \text{Child Count Ages 14-22}] \times 100$$

This represents the number of dropouts (students leaving school without a diploma) as a percent of students in school at that time.

- **Missouri Department of Elementary and Secondary Education (DESE):**

Dropout Rate of All Students =

$$[\text{Number of Dropouts} \div ((\text{Total September Enrollment} + (\text{Transfers In} - \text{Transfers Out})) \div 2)]$$

This represents the number of dropouts (students leaving school without a diploma) as a percent of enrollment.

Comments: OSEP's definition of a dropout rate differs significantly from Missouri's. OSEP is comparing the number of dropouts to the number of students exiting school thus producing a percent of exiters. Missouri is comparing the number of dropouts to the total number of students in school during that school year, thus producing a percent of the student population. Missouri's calculation method yields a lower rate because of this significant difference in definition, and comparisons between the two calculation methodologies should not be made. DSE's and DESE's rates are more closely aligned in methodology. The main difference is in the denominator where DSE uses the 14-22 child count as of December 1, and DESE uses average enrollment for grades 9-12.